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Po(10) **Pub. No.: US 2017/0280265 A1**(43) **Pub. Date: Sep. 28, 2017**(54) **METHOD TO DETERMINE LOUDSPEAKER
CHANGE OF PLACEMENT**(71) Applicant: **APPLE INC.**, Cupertino, CA (US)(72) Inventor: **Bruce C. Po**, (US)(21) Appl. No.: **15/514,455**(22) PCT Filed: **Sep. 29, 2015**(86) PCT No.: **PCT/US2015/053014**

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ABSTRACT

A system and method is described for determining whether a loudspeaker device has relocated, tilted, rotated, or changed environment such that one or more parameters for driving the loudspeaker may be modified and/or a complete reconfiguration of the loudspeaker system may be performed. In one embodiment, the system may include a set of sensors. The sensors provide readings that are analyzed to determine 1) whether the loudspeaker has moved since a previous analysis and/or 2) a distance of movement and/or a degree change in orientation of the loudspeaker since the previous analysis. Upon determining the level of movement is below a threshold value, the system adjusts previous parameters used to drive one or more of the loudspeakers. By adjusting previous parameters instead of performing a complete recalibration, the system provides a more efficient technique for ensuring that the loudspeakers continue to produce accurate sound for the listener.

